



E-Care @ Home

WP1: Functional Requirements Specification

D1.2.13: WT 'Measures': Common Functional
Requirements

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ABSTRACT
<p>This document describes functionality and nomenclature which is common to all 'measures' (previously referred to as tests) integrated into the WT system. This document is to be used in conjunction with 'test specific' functional requirement documents and wireframes.</p>

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ECH, WP1, UX specifications, Functional Spec, common, WT

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1) **Overview:**

In the terminology of the WellTogether (WT) service system, a 'measure' is a distinctly managed, modular sub-set of WT functionality that gives various WT stakeholders access to the tools needed to monitor the wellness status of individual Service Users as well as configure and receive alerts triggered by algorithmic computation based on monitoring data values linked to those alerts.

This document describes the common functionality and terminology available to individual measures depending on their application. It should be used in conjunction with functional specifications for specific Measures.

Terminology note:

In version 1, these applications have been referred to as 'tests'. From Version 2, all references to 'tests' are to be replaced by the term 'measures' wherever the term has been used.

2) **The core functional attributes of all measures:**

The functional characteristics of all measures will be described using the following terminology headings:

2.1. Parameter profiles.

Across all the databases recording the numerical status of each individual service user, it shall be possible to recognise compare and track data representing the same basic variable (e.g. weight) across all different types of gathering method and user. Each such basic variable will have a unique reference code and a set of core information associated with the eventual use modes of the measure. The measure parameter profile will have 3 main components: WT master reference parameters, organisation customised parameters and service user customised parameters. (see sections 3.1 , 3.2 and 3.3)

2.2. Data Readings

Each measure will collect and store data in the individual records of service users. Each instance of data recording will be termed a '**reading**'. The actual recorded variable is a '**value**'. Each reading will be automatically assigned a '**time stamp**'. Most measures will collect a single value, but some (e.g blood pressure) will record more than one value at each reading. Each value entry will be collected in the selected graphical display unit but will be converted and stored in the default unit for the measure. Each reading will also have an associated field for the 'reading taker' (the responsible individual) and the 'reading method' (manual or a specific approved device). (see section 3.4)

2.3. Measure Types

There are 4 main types of Measure applications: **Individual** which manages a single type of data measure reading (and which has a direct relationship with the unique master measure name), **Multi-viewer** which allows grouped viewing and data gathering functionality for up to 5 selections of any Individual Measure and '**Multi-Combiner**' which computes 'index' style values by combining the readings from individual measures. (for example BMI which combines weight and Height). (Note: the 'multi-combiner' is not in the scope of the ECH project.). '**alert only**' measures represent functionality that makes use of the standard alert functionality described in this document but is otherwise embedded in the functionality of individual portals. (see section 3.5)

2.4. Deployment Modes

The functionality of all measures will vary at different stages of deployment, from Mode 0- 'available in the WT master library through various possible customisation and distribution stages through to Mode 6 in which service users enter data and ultimately mode 9 representing a deleted measure. (see section 3.6)

2.5. Alert types

The system can be configured to set a selection of alert types and share these with other WT users. (see section 3.7)

2.6. Reminders

Users can set a variety of reminders to prompt users to take readings. These are recorded in the master parameter profile. (See section 3.8)

2.7. Permission Classes

Remote access permissions of different types can be granted to different user roles or individuals. These are recorded in the master parameter profile. (See section 3.9)

2.8. Portal compatibility profiles

Different levels of deployment status and associated functionality will be available on different portals. Individual Functional specifications need to describe which status modes and functions are accessible via each portal. (see section 3.10)

2.9. Portal display profiles

Each measure will have a default display profile consisting of the following parameters: interaction style: (Mouse, Tablet, smartphone) Colour palette (professional, consumer). These will not be user variable under any circumstances. **Section 3.11** defines the set of common graphical elements to which these variations will apply. Individual UX & functional specifications will define the exact presentations. (see section 3.11)

3) Parameter Profile

3.1. Master parameter reference profile

All deployed tests will have a set of master profile attributes as detailed below. Those listed below,

except for defaults, can only be altered by WellTogether (if at all) and when altered the changes will affect all past deployments.

3.1.1. A unique ‘measure type’ reference

A unique label for each physiological reading (as listed in Annex A – master measures list)

3.1.2. An ‘approved’ ‘care class’ profile

This refers to the three data security environment types at the heart of the WT system this parameter controls which user libraries can ‘see’ a test and what visual representation it is given.

- Consumer / informal care data which can be hosted on commercial cloud platforms like Azure or Amazon Web services.
 - Professional Care data whose sourcing might need to be the professional responsibility of the organisation providing the care.
 - Health Data: data that needs to meet all the stringent hosting requirements for electronic data records for individual countries and national health providers.
- All measures will have at least one approved ‘care class’ in the profile.

The care class will be automatically assigned by including a measure in one of the 3 libraries. The library source will determine the hosting strategy.

3.1.3. A ‘supported ‘measure type – variant’ profile

This refers to slight physiological variations in how measures are collected which may affect supported collection methods and alert thresholds. For example the single measure type ‘body temperature’ can be taken orally, in-ear or rectally. For medical data these difference may be significant, in an informal care context only oral and in-ear may be relevant.

3.1.4. Approved reading collection type profile

This will refer to a list of reading collection methods supported by the measure. The

default is 'manual only' until WT approves specific devices. For automatic device readings this list will include a list of 'approved model' references. Annex A will contain a list of approved automatic recording devices for each measure.

3.1.5. Units

The master set will include the units in which the individual 'values' are stored in the master database. (if/when users are offered the option of changing the units they see, data will be converted to and from the master units).

3.1.6. Defaults

By the time each measure is deployed to the individual service user, the 'master set' for each measure will also include parameters set and held in the records of CMP owning organisations or service users.

3.1.7. Information page

Each measure will have an information page accessible at any time before or after deployment. This may or may not be user changeable, depending on permissions.

3.1.8. Data display profiles

Some Measures will support a degree of flexibility in the presentation of the data: Graph type (Bar, line + others TBA) and colour: (from a standard WT data graph palette). Each measure will have a default state for both presentation variables.

3.2. Organisation Customisation profiles

During deployment, involving care organisations, the parameters listed below can be edited and saved as part of the deployment process.

3.2.1. Hosting location

Organisations will be offered service user record hosting options that are different from service user's the informal care records. For professional care data WT will be offering a

range of options from local hosting to secure clouds. For public health records WT will aim to support the preferred data strategies in different countries or health care organisations.

3.2.2. A unique CMP ‘institution’ user reference

This refers to the specific CMP license holding organisation responsible for the data in a professional care relationship, for example a Care Home or a Local Health Authority. This will be the access header for ‘organisation library customisations. Default = none

3.2.3. CMP user assigned ‘measure reference’

CMP license owning organisations will be given the option to keep differently named variants of the same basic measure. (for example with different default alert thresholds, collection methods or collection devices). Default = name as per name in master library.

3.2.4. Organisation assigned profile subsets:

Organisations will have the ability to limit which of the measure variants supported in a master library they wish to support in their processes. If desired they can separate the measure variants into individual measures with different profiles etc. These refer to measure variants (e.g. oral, in ear temp) collection methods (manual vs. automatic recording) and collection device (device type and model)

3.2.5. Organisation assigned permissions

One key general principle is that all individual readings need to be traceable to an individual person or device. In informal care scenarios the default will be the service user. In organisational scenarios recording permissions can be limited to different user roles. For examples a temperature record taken by a paid care visitor can be kept separate from a temperature record taken by a nurse.

3.2.6. Defaults:

Organisational Customisation profiles can change the WT defaults for the parameters in Personal Customisation profiles. For example the alert thresholds.

3.3. Personal Customisation profiles

These are kept in the service user record and updates are also kept as part of an individual service user's measure history. These can be set by the prescribing organisation or by service users themselves.

3.3.1. A unique WT ID reference for the individual SU to whom the data refer

All users will have an individual 'WellTogether' account reference regardless of whether or not they also have an 'institutionally assigned' reference. The default will be the master WT service user ID.

3.3.2. A list of WT linked 'organisations' keeping data.

Service users record will have a list of organisations involved in their care/health record keeping and links to those care records made available via WT. (availability will be controlled by the organisations subject to commercial terms and national laws.)

3.3.3. A unique organisationally assigned Service user reference.

All Service Specific CMP owning Institutions will be able to assign their own unique user references to service users / patients in their care. (Individual Service users can have multiple 'institutional' references). Default: this can be a composite of the service user's unique WT ID and the organisation's unique ID.

3.3.4. Reminder record profiles

User stakeholders can manage multiple reminders associated with each measure. Professionals can set default reminders and control individual service user permissions. (For more detailed information see sections 3.8 and 3.9).

3.3.5. Alert parameters

This refers to the thresholds beyond which readings will trigger alerts. The default will be those in the libraries at download.

3.3.6. **Recording Units:**

The database will retain units in the 'master reference set units. If the reading interaction offers users any choice of units, the measure SW must convert the unit locally into the master units.

3.3.7. **Permission profile**

A list of the exact WT users or user classes given permission to edit or view the readings and parameters in a service user record. The default is that this the same as the service user to whom the data refer. Alternatively responsibility can be assigned to a 3rd party by either service user or a carer prescribing the measure. CMP users can assign access permissions according to user role.

3.3.8. **'paired device' device references**

When a device of an approved type is paired with a tablet, the he exact unique individual reference of the device will be added to the personal customisation profile and will be noted each time it is used to collect a reading. There can be more than one paired device.

3.4. **Data readings**

In addition to the master reference set profile each individual reading will have the following attributes:

3.4.1. **Values:**

Each reading action will add a pre-determined number set of values to the unique data base coordinates (see section 3.1). For example, weight in an 'individual' measure will record a single value. Blood pressure readings will record 2 values. In the 'multi-combiner measure of BMI (Body Mass Index), the single reading 'weight' will combine with a separately entered parameter (height) to calculate BMI. Both the weight and BMI databases records are updated with latest values.

3.4.2. Time Stamps

Each reading activity will associate the set of values with a unique time stamp. (down to the second). Default time will be local time for Service user.

3.4.3. Reading owner

Each reading will be assigned an 'owner' depending on who is responsible for taking the reading. Depending on permissions and set up this can be either the service user themselves, a named individual professional acting on their behalf. The reading owner and method will be displayed in 'tabulated' view.

3.4.4. Reading method

Each reading will be assigned a method depending on and how it is taken. If data is entered by a user the method is 'manual'. This is the default. When a data collection device is used, the owner is the person responsible for using the device. The 'method' will be recorded as 'device type' + individual device reference. If all the other parameters are unchanged, the database will record both manual and automatic readings in the same set. So for example, if an automatic recording device failed, manual entry could be used for the same reading, and the graph would display both values equally. The reading method will be displayed in 'tabulated' view.

3.5. Measure types

3.5.1. Individual

An Individual Measure manages information about a single 'reading' variable. This will usually be a single numerical value, but in certain cases this may consist of 2- for example systolic / diastolic measures of blood pressure. The functionality of an individual measure is self-contained to that measure.

3.5.2. Multi viewer

A multi viewer is a tool that allows sets of individual measure to be 'grouped' into a collective viewing and management environment. Multi viewers can group any number of individual measures from 2 to 5. Multi viewer measure configurations can be customised by users, stored under user assigned names and shared like individual measures. Different viewing / edit permissions can still be assigned to different users. When sharing the configuration of the multi viewer can be 'locked' by the sharing user. Typical example is a life chart prescribed for self tracking of mental health conditions. For more detailed functional information see – doc ECH D1.2.1-functional specification and wireframes.

3.5.3. Multi-combiner

A multi combiner will allow the readings on individual measures to be combined into a single value based on an algorithm. Multi combiners can be accessed as individual tests but will store readings for individual measures in the correct data base field for that measure in addition to the new database field for the single reading computed by the algorithm.

3.5.4. Alert only

An 'alert only' measure is a process that collects readings automatically and uses the common alert mechanism to flag issues that aren't directly related to physical wellness, but which impact on vulnerability. Typical examples – low power or loss of end to end signal path on the tablet, or a missed care visit in a professional care scenario.

3.6. Deployment modes

3.6.1. Mode 0: available in the WT master library

The master code for each set will be hosted by WTL, it will be written in English. Deployment to mode 1 will be determined by WTL. These will have an english UX.

(WT- MWML – E) In this mode no information related to this measure will exist in any specific user record.

3.6.2. Mode 1: available in a Language customised master library.

Once translated the master code for each measure will be kept in a specific master library / language hosted by WTL. Mode 1 access will be for user testing purposes etc.. This will be known as the **WT- Master- Wellness Measure Library**. It will be hosted and managed centrally by WT.

3.6.3. Mode 2: available in one of 3 master ‘data class; libraries’

There will be 3 master libraries, one for each class of data. These will be known as **WT- Master- Wellness Measure Library – (C or B or H)** Where C= consumer, B = business, H = health. Approved and user tested measures, in each language, will be available directly to users from any of 3 ‘mode 2’ library access URLs. One for each ‘storage class’ to which the gathered data needs to belong: consumer, professional care and health care. Measures to be ‘prescribed’ by care professionals and hosted accordingly, will only be available from the CMP.

3.6.4. Mode 3: customised & available from the library of a specific care institution

Professional care organisations – as CMP license holders, will be able to download measures from a mode 2 URL, amend names and settings and save in ‘institution specific’ libraries for prescription to service users.

3.6.5. Mode 4: personalised and prescribed to a service user via the CMP

Professional carers will also be able, via the CMP to customise certain test parameters (for example specific alert limits or the measures associated with a ‘multi viewer’. These parameter changes will affect the master reference sets and will be logged in the relevant service user record even after they have been changed. Prescribers can also lock certain parameters to prevent services users altering them.

3.6.6. Mode 5: Self-selected by a service user.

Service users will only have access to the 'consumer' mode 2 library. The URL will be accessed through a control in the wellness subsection of the Homepad. When selected the master parameter profile will be added to the user record and a 'tile' will appear on the splash page of the service user Homepad. (mode 6)

3.6.7. Mode 6: In 'self record' use by a service user

Once the deployment has reached this mode, where permissions allow, service users may be able to alter certain parameters like reminders and alert settings these will be stored in the Service user's 'personal customisation profile.

The Service User will also be making periodic readings and, where permissions allow, the their service user record will retain a historical record of those readings.

3.6.8. Mode 7: In 'pro administered' use by professional carers

Measures can be prescribed to service users, but the readings can only be taken by nominated individuals or named roles. This data is saved to the service user record associated with the collecting institution. The service user will be able to access these 'other organisation' records via the Homepad.

3.6.9. Mode 8: Alert list configured

Given permissions, service users, FFP users or CMP users can either make themselves 'alert receivers' or invite 3rd parties to become recipients of any individual alert. 3rd parties need to accept the invitation to be considered 'alert receivers'. Service users and their trusted agents shall be given the ability to view all alert recipients for each alert. More than one recipient can be selected for any alert. In this situation, alert recipients will belong to an 'alert list' in order of priority: 'first responder, second responder etc... Given permissions, service users, trusted ffp users or prescribing cmp users can also remove people from any alert list and clear all alerts.

3.6.10. Mode 9: Access rights shared with a FFP user

Given permissions, service users, FFP users or CMP users can share access to any individual measure with any third party. This will mostly be viewing only access but for ‘totally trusted users’ and ‘CMP prescribers’ access rights will include edit rights to all settings.

3.6.11. Mode 10: suspended

Given permissions, service users, trusted FFP users or prescribing CMP users can with one touch, suspend all activity, reminders, alerts etc. associated with a measure. The measure tile will have a clear visual indication of the suspended state. Historical data will remain in the service user record. The tile can be fully reactivated at any time.

3.6.12. Mode 11: deleted.

Given permissions, service users, trusted FFP users or prescribing CMP users can fully delete any measure. In this instance the historical record will also be deleted.

3.7. Alert Types

Within measures, readings are assessed algorithmically and alerts are triggered when planned conditions are met. Different conditions trigger different alert types. When designing alert algorithms and thresholds, it is important to understand the different alert types and plan accordingly. Not all alert types need to be used in every instance, only those that have a useful purpose. The supported alert types are:

3.7.1. Red (immediate attention)

Red alerts should only be used for situations when immediate response action is required. For example a very low or high body temperature or a service interruption to a vulnerable service user.

3.7.2. **Orange (early warning)**

Orange alerts tend to be used to indicate a dangerous trend, as in ‘needs prompt, but not immediate attention’. Typical amber algorithms are triggered when readings stay outside a healthy range for a sustained period, For example high or low weight, or activity levels.

3.7.3. **Yellow (service alert)**

Yellow alerts tend to be used for administrative purposes, a prompt to contact a user, a carer flagging a service user who keeps denying consent for care etc.. They can also be used as light ‘trend prompts’ in self-care situations. As it “if you continue at this rate you won’t meet your goal”

3.7.4. **None**

This is the default state for all alerts.

3.7.5. **Green (booster alert)**

Green alerts are meant to be used at regular intervals as interim ‘booster’ messages if progress towards positive wellness goals is going well. E.g. progress on weight loss or towards self-set activity goals. Typical algorithms will be trend based.

3.7.6. **Gold (congratulations)**

A gold alert is meant to be used in a congratulation way when positive wellness goals are met. For example a weight target. In user set measures, or others users will be encouraged to set their own rewards which they can be reminded of when the conditions for triggering a gold are met.

3.7.7. **Recorded**

If users have paid for a monitoring service, all alert events will be logged in an ‘alert history’ in the service user record.

3.8. Reminders

Reminders are used as prompts for data reading collection activities. They can be set at any time like a diary appointment and repeated. Reminders will appear in the calendar.

The repeat options are:

3.8.1. Every (user selects) hours

3.8.2. Daily

Every 24 hrs after the original

3.8.3. Weekly

On the same day of the week

3.8.4. Monthly

Monthly = first instance of same day of the week in the following month

3.8.5. Delayed

Any reminder can be delayed by (user selected) hours, this delay doesn't change the scheduling of repeat reminders.

3.9. Permissions classes

3.9.1. Data storage rights

3.9.1.1. No service payment

Accept reminders and readings, check for alerts only

3.9.1.2. With payment

Track full data reading history graphs.

3.9.2. Access permissions

3.9.2.1. View readings

The right to remotely access the detailed view of a service user's measure

3.9.2.2. Anonymised view

The right to remotely access the readings in the service user record and limited information about the service user relevant to medical profiling (age gender conditions etc..)

3.9.2.3. Make readings

The right to remotely, or via the HP make readings on behalf of the service user.

3.9.2.4. Edit view settings

The right to change the presentation of a measure e.g graph type or colour. In the case of a multi-viewer 'view settings' include which individual measures are associated with each multi viewer deployment.

3.9.2.5. View reminders

The right to remotely see what reminders have been set for or by a service user.

3.9.2.6. Edit reminders

The right to change reminders

3.9.2.7. Edit alert parameters

The right to change what numerical values and algorithms trigger which alerts, or to decide who gets alerts or to cancel all lists of alert alert recipients (see wireframes)

3.9.2.8. Edit alert recipients profile

The right to invite WT users onto an 'alert recipient list' and remove them from the list. Recipients should also have a one-time 'opt out' permission if they are unable to respond.

3.9.2.9. Alert response status

The right to 'cancel' alerts received after responding. Other options include 'suspend for 5 minutes' and 'nuisance off' to deal with false alarms, or multiple alerts triggered automatically by machine readings.

3.9.2.10. Selection & deselection rights

The right to add a test to a service user record, configure it and suspend or delete it.

3.9.2.11. Sharing rights

The right to give others access permissions to all the above.

3.9.2.12. Other records

The right to allow other organisations to see one organisations service user record. This will require the consent of both the service user and the organisation whose record is being shared.

3.9.3. Main Permission control scenarios

3.9.3.1.1. Service user download

Service user has control over all access permissions, default is yes to all. No access permissions are shared with anyone.

3.9.3.1.2. Totally Trusted Agent download (see roles)

Totally Trusted Agents can download measures remotely to a Service User. In this situation both the Service User and the Totally Trusted Agent have control over all sharing permissions. Totally Trusted Agents can also individually remove all Service User access rights except viewing data. They can also manage alerts on behalf of the service user (e.g. de-select alert recipients, clear all alert recipient lists and amend alert threshold levels).

3.9.3.1.3. Prescribed 'push' download

The default is that the prescriber has control over all rights granted to the service user other than viewing rights which are guaranteed. When permissions are not granted to service users, the default behaviour is that the controls associated with those permissions should not appear to the service user.

3.9.3.1.4. Alert recipients

Alert recipients will by default be given the right to make a 1 time change to their alert status by 'opting out' if unable to respond. This will trigger sending the alert to the next recipient on the list. Alert recipients will also be given the right to change alert status from 'alert on' to 'cancel' or to 'suspend for 5 minutes' or 'nuisance off until further notice'

3.9.3.1.5. All others

All other situations access permissions are granted to individuals from a 'sharing' workflow accessed from the detailed view of each measure.

3.10. Portal compatibility profile

3.10.1. CMP

3.10.1.1. Library access:

CMP users will be able to access all 3 master libraries and all functions

3.10.1.2. Permission defaults

3.10.1.2.1. Master library settings as open and flexible as possible

3.10.1.3. Admin users can organisational default by staff role

3.10.1.4. Functionality limitations

all modes supported

3.10.2. FFP

3.10.2.1. Library access:

Limited to 'informal care' library

3.10.2.2. Permission defaults

Service User assigned, by user type as part of invitation process

3.10.2.3. Functionality limitations

3.10.2.3.1. no 'organisational' functionality e.g. storage of customisations

3.10.2.3.2. measures can be 'prescribed' / suggested ie selected and pushed to service users but service user delete permissions can't be removed and default permissions should be more open than organisational prescriptions.

3.10.3. **Homepad**

3.10.3.1. Library access:

Limited to 'informal care' library

3.10.3.2. Permission defaults

As open as system allows

3.10.3.3. functionality limitations

3.10.3.3.1. no 'organisational' functionality e.g. storage of customisations

3.10.4. **Smartphone portal**

3.10.4.1. Library access: None

3.10.4.2. Permission defaults: make a reading, view and clear an alert

3.10.4.3. functionality limitations

3.10.4.3.1. none other than:

- 3.10.4.3.1.1. receive / postpone a reminder
 - 3.10.4.3.1.2. enter a reading
 - 3.10.4.3.1.3. receive an alert
 - 3.10.4.3.1.4. clear an alert
 - 3.10.4.3.1.5. 'opt out' of an alert
 - 3.10.4.3.1.6. 'send / receive a message'
 - 3.10.4.3.1.7. 'send/receive a call' (video or audio only)
- 3.10.5. **Nurse pad** (TBA)
- 3.10.6. **Entry Only portal** (TBA)

3.11. Portal display profiles

- 3.11.1. 3 UX deployment classes.
 - Measures will be deployed across 3 classes or platform
 - 3.11.1.1. Touch
 - 3.11.1.2. Mouse driven
 - 3.11.1.3. Small screen touch
- 3.11.2. Commonality strategy:

3.11.2.1. Top level elements only (see next section) will match control UX look and feel

3.11.2.2. All other elements will use common shape element, with accent colour customisation to indicate data class.

3.11.2.3. Main differences

On any scrollable 'touch' page that doesn't have a dedicated scrolling control, a scroll bar will need to be added.

3.11.3. **Control elements:**

There will be a common design of layout and control detailing across all portals. The main elements are:

3.11.3.1. **Library headers**

3.11.3.1.1. Data class look and feel:

The 3 main libraries (informal / pro / health) will each have their own colour palette (see colours). Users should encounter this palette in the Library headers.

3.11.3.1.2. These will clearly show 'already selected tests'

3.11.3.1.3. Graphics as per separate UX/Wireframe specifications.

3.11.3.2. **Test info page**

This will display information about the measure in question (see wireframes/UX). Text to be specified in the functional specification of each individual record.

3.11.3.3. **Main tile.** – Presentation will match the common usage in the relevant portal.

Informal care (Home pad and CMP) – level 2 look

Professional care (CMP and as per current look)

3.11.3.3.1. Data class accent colour (see colours)

3.11.3.3.2. Status tags:

3.11.3.3.2.1. Recommendation – needs accepting

3.11.3.3.2.2. New prescription

3.11.3.3.2.3. New reading overdue

3.11.3.3.2.4. Alert status (none/colour etc....)

3.11.3.3.2.5. Test suspended

3.11.3.3.2.6. Access is Shared

3.11.3.3.3. Latest reading

3.11.3.3.4. Units (user selected)

3.11.3.3.5. Multi-viewer rules

3.11.3.3.5.1. Width

Multi viewer tiles will have a width rule determined by the number of measures associated with the multi viewer. Up to 5. Latest test readings and flags will be displayed as per rules for the individual test. Templates at

3 wide, 4 wide and 5 wide will be available in the library, but on 3 And 4 wide the width can be expanded if an extra measure is added.

3.11.3.3.5.2. Set up / amend views

During set up and at any time afterwards users (with graphical change permissions) will be given the option of changing the order of the test (left to right) and its name.

3.11.3.4. **Main detail views**

Main detail views will be as common as possible cross all portals.

Not all functionality will be supported on all portals.

Functionality for which a user does not have access permission will not be displayed.

There are two main viewing formats for individual tests:

3.11.3.4.1.1. **Graph view**

As per WT graph template – default format will be line graph. Default no.2 option is bar graph. Graph format is reading value on the vertical axis, time on the horizontal. (See templates). The Timescale variations are 1 day per page, 1 week per page 1 month per page, 1 year per page, all data on one page. The Y scale will adjust automatically to display lowest value aligned to bottom edge and the highest value aligned to the top edge (with small visual gaps to the edge as per templates. The default time period displayed will have 'now' on the extreme right side. The start and end dates of the displayed timeline scale will be listed in the control bar.

3.11.3.4.2.

3.11.3.4.3. **Table view (show info)**

This will display all the pertinent data for each reading:

3.11.3.4.3.1. Date

automatic set by system / device time

3.11.3.4.3.2. Value(s)

in user selected units

default = 'no reading'

3.11.3.4.3.3. Variant (e.g aural vs rectal temp)

first default = master default , then 'as per last reading'

3.11.3.4.3.4. Reading type (e.g. manual/auto)

default: first = manual, then 'as per last reading'

3.11.3.4.3.5. Reading device.

default: first = none, then 'as per last reading'

3.11.3.4.3.6. Reading owner:

default: first = service user (homepad) FFP user (FFP) Smartphone user or 'login' (CMP). then 'as per last reading'

3.11.3.4.4. **Multi viewer variations: (e.g. the life chart)**

3.11.3.4.4.1. Tabs.

On multi viewer measures individual charts can be viewed as 'overlays' and selected using 'tabs' (see wireframe examples)

3.11.3.4.4.2. **Stacked views**

There will also be a option to view the graphs aligned below each other.
(see wireframe examples)

3.11.3.5. **Data entry views.** (log readings)

To be built from the common components toolbox as required.

3.11.3.6. **Reminder management views**

These will control the setting up of reminder functionality as specified elsewhere, controls to be selected from UX toolbox.

3.11.3.7. **Permission control views**

These will give access to the functionality needed to invite sharing partners and assign permissions to them. (see example wireframes – [ref](#))

3.11.3.8. **Alert control views**

These will give access to the functionality needed to invite alert recipients and, where relevant, set alerts and thresholds.

3.11.3.9. **Manage Devices view:**

When a measure supports one of more devices, a manage devices button will appear on the detail view. Access to this view will show.

3.11.3.9.1. **Available devices**

3.11.3.9.1.1. Tiles for supported devices

3.11.3.9.1.2. Information page

3.11.3.9.1.3. 'buy' links

3.11.3.9.2. **Selected devices**

3.11.3.9.2.1. Connection

3.11.3.9.2.2. Info

3.12. **Colours:**

3.12.1. **Main backgrounds**

The main colour palettes for backgrounds and designs will match the common palettes for the portal in question.

3.12.2. **Coded accent colourways**

These will be used to clearly identify the 'data' class of each measure. (see next section). The data classes are associated with the collection regime. The data class will be assigned automatically on the basis of which library is the source of the measure download. There will be 3 accent colourways:

3.12.2.1. **Consumer / Informal care (Orange)**

All measures for which the user, or informal carers are responsible for the collection of data readings will use an Orange accent palette. (exact shades in templates).

3.12.2.2. Professional care (current CMP light blue/grey)

All measures for which the user, or informal carers are responsible for the collection of data readings will use a light blue/grey palette (exact shades in templates).

3.12.2.3. Medical (Blue)

All measures for which the user, or informal carers are responsible for the collection of data readings will use a Blue accent palette (exact shades in templates).

4) Common workflows

See wireframes for details

4.1. Adoption and configuration workflows (all subject to permissions)

4.1.1. Self select a measure from a library (one of 3 masters or organisation)

After the Mood Test has been selected from the test library (by pushing 'add' in the test info view) a standard tile appears in the allocated scrollable 'user selected measures' area on the relevant portal (e.g. the Homepad wellness overview page or the corresponding CMP 'organisation library'. The tile is added to the top left position in the scrollable field. The addition of a test amends the individual service user record of the Homepad user or the institutional record of the CMP user. Default values for user controlled parameters are added to the record and the appropriate data fields are set up and set to 'no data'

4.1.2. Rename

Users can add their own label to the default one provided. (for example – Mood test – by

me, or Mood test 'by my partner'). The relevant service user or organisation record is updated.

4.1.3. **Apply Measure specific customisations** (e.g user defined activity measures)

Some consumer library measures and all those available in the 'Business' and 'Health' libraries will allow users to customise some test parameters.

4.1.3.1. **Homepad and FF user customisations.**

HP and FFP user customisations can only be held in the relevant service user record.

4.1.3.2. **CMP customisations**

CMP users can create 'institutional customisations' of the user controlled test parameters and store these in their own 'institution specific' library.' These 'differ from directly downloaded individual tests in the following ways:

4.1.3.2.1. Re-usable with multiple individual service users

The 'Pre-Configuration' Test Profiles are stored in a library specific to the CMP licensing institution: the 'Institution Specific_Wellness Test CMP Library (I-WT-CMP-L) and can be reused for multiple users.

4.1.3.2.2. Lockable parameter customisation

Pre-configuration allows CMP users to set and 'lock' selected user configuration parameters. (for example alert thresholds, reminder settings etc..)

4.1.3.2.3. Access permissions for 'pre-configuration' via the CMP

The CMP will provide edit access permission control, via either individual login or employee role, to restrict who is allowed to create and set parameters for institutional customisations.

4.1.4. Customise alert types and levels (see different deployment modes)
(See previous section and wireframes)

4.1.5. Set reminders (defaults or personal)
(See previous section and wireframes)

4.1.6. First reading:
Select from default reading and device types as part of the recording process. Once the 'save entry' button is pressed, these will become the new defaults for each reading.

4.2. Routine use workflows

4.2.1. Take a reading
Accessed via the control bar on the measure detail view (See wireframes)

4.2.2. View readings
Accessed by the control bar on the measure detail view. This changes the main view from graph to tabulated format, showing the full range of information for each reading – timestamp, reading taker, format etc.. (See wireframes)

4.2.3. Amend reminders
See wireframes

4.3. Privacy and sharing workflows

4.3.1. Prescribe a measure

4.3.1.1. Fast add:

A CMP user (e.g clinician) will have the right to 'prescribe' either a blank or 'pre-configured' Measure (e.g. Life Chart) from the appropriate library. This will be controlled from the CMP. This will directly add the measure 'no data' set to the service user record with the preset default configuration selected by the CMP user.

4.3.1.2. User consent:

In 'prescribed' situations, it is assumed that 'blanket' patient consent has been obtained. If consent is required the 'recommend' workflows should be used.

4.3.2. Recommend a measure

HP and FFP users can access the 'consumer' library and trigger a 'recommend' action. This will send a note, with a link to the test info page (as per routine behaviour) and a 'would you like to try this test' option. If the test is 'added' the default configuration profile is set up in the individual service user record

4.3.3. Share access to a measure

4.3.3.1. Accessed by pushing 'manage sharing' (as per templates). This will show, via contact section style level2 tiles in a scrollable field, who has viewing privileges and will offer functionality as follows:

4.3.3.2. Manage permissions for a selected sharing partner

Selecting one of the level 2 tiles will display the permissions list available to the user with yes no toggles for each type of permission. Which can be adjusted as necessary.

4.3.3.3. Invite a new person to share with

in the manage sharing view, the control bar will display a 'add a new sharing partner'

. This will access the browse section of 'contacts' – pushing the tile will send an invitation message. And display a confirmation screen. The message will contain an auto link to 'accept' or 'refuse' – Once accepted the person will be added and permissions can be configured.

4.4. Invite a new alert recipient:

4.4.1. Workflows as per add a new sharing recipient.

4.4.2. Multiple alert recipients:

When multiple partners can receive alerts, they can be assigned to an 'alert list' as '1st, 2nd respondent etc.. via the UX (as per wireframes)

Alerts will be sent to each respondent in turn, with a set 'wait' delay in between.

4.5. Opt out of receiving an alert:

A any stage alert recipients can access a control on their main portal to remove themselves from an alert list. This will be actioned directly in the service user record and a message will be sent to the affected service user.

4.6. Alert workflows

4.6.1. Receive an alert

4.6.1.1. Via HP/FFP or CMP

Incoming alerts will be displayed in the appropriate area defined in the portal UX

4.6.1.2. Via smartphones

Method to be confirmed. Preferred method will be via automated SMS message.

4.6.2. **Deflect an alert** (one time opt out)

When an alert is received users should have the option of immediately 'deflecting' an alert to the next person on the list.

4.6.3. **Respond to an alert**

When an alert is received, this information goes into the service user record with an 'alert sent timestamp and users should be offered a 'smart response' menu with the following options:

4.6.3.1. A list of key contacts (some on WT some not)

4.6.3.2. A contact view with the contact selected (1 touch call / message controls)

4.6.3.3. Clear alert control

Dismisses the alert screen and clears the alert. This will update the service user record with an 'alert cleared by' person/time stamp.

4.7. Exceptional workflows

4.7.1. Adding / changing data recording device

4.7.2. Data storage limits exceeded

4.8. Archival workflows

4.8.1. Suspending a measure

4.8.2. Deleting a measure

5) Adding an automated measurement device

It shall be possible to set up a link between WT selected measurement devices – e-g scales. And the readings fields in the service user database for the test.

WT will add ‘supported devices’ to the measure profile.

A list of these will appear in the ‘manage devices’ page for the relevant measure. With a ‘buy’ option.

Once a device is in situ, the individual measure will support a ‘connect a device’ workflow for pairing – this will depend on the data link e.g Bluetooth or Wifi.

Where supported devices are paired connections will be automatically set up as soon as a reminder or a reading screen appears.

If a connection can’t be made a failure alert will be sent.

